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A Study of Bird Songs.

BY JNO. J. WILLIAMS

CHAPTER II. COMMON AND SPECIAL NOTES.

BEFORE considering some of the various bird notes in detail, I will quote one or two passages from Darwin's "Descent of Man," as being specially pertinent at this point: "The sounds uttered by birds offer in several respects the nearest analogy to language, for all the members of the same species utter the same instinctive cries expressive of their emotions, and all the kinds which sing, exert their power instinctively; but the actual song and even the call-notes are learnt from their parents or foster-parents." (See chapter III.)

No one acquainted with birds will gainsay the latter part of this quotation, for incidents in which parent birds have been seen teaching their young to sing or utter their own songs or call-notes are of common occurrence, though it may be probable that young birds frequently, partially learn to repeat the various notes of their parents without the latter consciously aiding them. He also leaves the reader to infer that even though a crow's vocal organs are structurally and essentially similar to those of the nightingale, no amount of repetition or practice will teach him to sing like the latter. Further on, in chapter XIII, he says that "With birds the voice serves to express various emotions, such as distress, fear, anger, triumph or mere happiness. It is apparently sometimes used to excite terror, as in the case of the hissing noise made by some nestling birds. * * * * * Some social birds apparently call to each other for aid, and as they flit from tree to tree, the flock is kept together by chirp answering chirp. During the nocturnal migrations of geese and other water fowl, sonorous clangs from the van may be heard in the darkness overhead answered by clangs in the rear. Certain cries serve as danger signals, which as the sportsman knows to his cost, are

understood by the same species and *by others*. The domestic cock crows and the hummingbird chirps in triumph over a defeated rival."

Generally speaking, social birds are kept together by chirp answering chirp, as he says, but the call-note of a species is not restricted to this use entirely. For instance what a common sight it is to see blackbirds, robins, goldfinches or meadowlarks congregated in trees or on meadows and each and every bird uttering a great variety of their notes or songs continuously, one trying to outdo another. Not only is this so in the mating season, but even in the midst of winter a gleam of sunlight will cause them to twitter in this way, apparently in a spirit of emulation partly, and also as a vent, I suppose, to their own buoyant spirits. Again many of us who have hunted game birds know that they have danger signals or warning notes which they use to advantage as occasion demands, and most of my study of special bird notes has been aided by studying the special notes of game birds primarily. These notes are used much more frequently by our two local species of quail than by other birds because the necessity of their use is more urgent.

A sparrow will flirt its wings and tail vigorously and make indiscriminate use of any of its common notes, on the approach of a person, disappearing quickly into some bush or hollow. With our mountain quail, (*Oreortyx p. plumiferus*) it is different. Instinctively he looks for some shelter to run to or if necessary to fly to, at the same time uttering his creaking, warning note, a rapid and nervous "cree-auk, cree-auk, cree-auk-ah" and some other inimitable chattering, and quickly the flock gets ready for flight, or strikes out on the dead run for the high timber, as is the usual case.

If you follow close after them through the brush, they can be heard calling to each other with their call-note "kow kow, kow, kow" to keep the flock fairly united in its rapid march, but oftentimes as soon as you stop to listen to locate them they are silent, save for the retreating scurry of their feet in the dead leaves and only when they are sure of their safety, will they make any real effort to gather themselves together by the use of the call note. These two examples illustrate the difference in the two types.

The first, an ordinary seed-eater, is *sought* by no one and knows it too, and often, more from surprise than real fear, he utters the first note that comes into his head, for I have frequently seen numbers of these birds glide quietly into their leafy shelters, leaving their comrades and mates to be surprised as they were. The quail though has learnt by experience that while there is safety in flight, still the other members of the flock must be warned of the impending danger. For all that, other species of birds have and use their danger notes, only because they are rarely as emphatic, we fail to notice them and besides these species do not need them ordinarily.

For a long time I thought that danger or other special notes were unknown to woodpeckers and in consequence was greatly surprised to hear a female Gairdner woodpecker (*Dryobates p. gairdneri*) utter a special note caused by extreme fear when pursued and almost caught by one of our smaller hawks. Another time I witnessed the death struggle of a severely wounded California woodpecker (*Melanerpes f. bairdi*), and for some time previous to its death the bird uttered the most distressing cries imaginable, which quickly drew, *not* one of its own species, but a ruby-crowned kinglet (*Regulus calendula*), whose anxious actions showed how thoroughly he sympathized with the stricken woodpecker. In this instance the notes uttered by the latter

were those of extreme distress but for all that the kinglet understood them and even hovered several times within a few feet of my head, as if to implore me to put the bird out of its agony.

As an illustration of the difference between the call-note and the danger signal of some of our smallest birds I will take the notes of the California bush-tit (*Psaltriparus m. californicus*). Why these mites of birds should use a warning signal when near human beings, is beyond me, as they are practically unmolested by them at any time, yet such is the case. Here they flit incessantly, in small companies, from one bush to the next over the brush-covered hillsides, passing rapidly along usually on a straight course, completely absorbed in the search for their minute insect food and uttering a continuous chorus of fine lisping "tsit it it tsee ee ee." Frequently I have heard them coming some distance off and have placed myself in the open, close to their line of travel in order to observe their actions better. Nearer they come until they are within arm's reach and their call notes still sound as merrily as before. Suddenly one of them recognizes in me something strange and unusual. Not a move have I made and yet first one and then another gives the warning note, an imperative little "tswit-tswit-tswit," and as if by magic, they pass around me and some little distance away. Not one has flown directly away from me but for the sake of safety they have changed their course temporarily. In a minute or so their warning notes cease, they feel easier and their cheery little call-notes sound forth again as they resume their original direction through the bushes. In this case the cause of the warning note together with its effects on the flock, were self-evident, while the utility of the call-note lies in its keeping the rapidly moving flock together. Still to conclude that the call-note of a species is needed just to keep the flock united is a big step, for in seeming contradic-

tion to this conclusion, we have great aerial wanderers like the hawks and eagles who are often widely separated from their mates but who rarely utter *any* note, except when with others of their species.

In quite a few species special danger or warning notes are unknown so far as I am aware, but the birds make use of the call-note as an efficient substitute by repeating it much more rapidly. This is so with the common snowbirds or juncos for usually the call-notes "tsit" and "tsut" are scarcely noticeable although heard anywhere, but frequently on looking for their nests, I have caused them much distress, as they are extremely suspicious (oftentimes betraying their own nests by being so) and will then repeat their call-notes very rapidly but once their nest is discovered their uneasiness vanishes partially and the repetition of the call-notes is less rapid. Some other birds have besides their common and special notes, a flight note that in a way is a call-note, for it is rarely ever uttered by the species except when they are actually flying and from this constancy in its character it is possibly used intentionally by the birds as a flight call-note. The flight notes of the red-shafted flicker may be taken as a good example, although they vary somewhat in individual birds. The notes are "kruh ur rur ruh ruh" varying to "koh ur ur ruk" and the phrase is repeated once or twice fairly rapidly, during the undulating flight of the bird. Vigors wren has a call-note which is in no way peculiar but the arrangement and repetition of a common or basic note into a series of notes, may be given as typical of the call-notes of quite a large number of birds. It is "pwit pwitwit-pwit-pwit-pwitwit." The note "pwit" repeated three or four times with an equal lapse of time between each repetition, is used commonly by this species when they first wake up in the morning but occasionally the rising note, if it may be called that, is the warning note, a very harsh "bweeip-

bweeip." Why they should use this note on first waking up, I have been unable to understand. They use it commonly on the approach of human beings and in several cases I have seen other bush birds take advantage of it.

Both of our common jays have a great variety of notes and I have been unable to make much headway with my study of them, as frequently the birds are not very particular which note they use. The common call-note of the blue-fronted jay is "kuk kuk kuk kuk." Then they also have a harsher call-note "krewee" but it is not a common one. The species though, cannot be passed by without mentioning its imitation of the cry of the western red-tailed hawk, "kwee o yerh." This is so well done that as Mr. Keeler says in his "Bird Notes Afield," "the most experienced ear will be deceived." Undoubtedly the bird makes use of it as a warning to other birds at certain times when danger is around but at other times in the spring he uses it to show off his abilities to his prospective mate. Another species that has two different call-notes is the California woodpecker, for besides his common call-note "ka rac ka" he has another commonly used that is "yea cup."

Turning now to the birds that are songless or comparatively so and whose notes may be taken in part as substitute for songs there are two birds that will fairly illustrate this class or connecting link between the true singers and those that can only utter notes. The first is the wren-tit, a bird with a very pleasing trill as its chief attraction, for its colors are of the plainest. It is hard to consider this trilling "tit tit tit ter tree ee e," not a true song but rather as a common call-note, yet such I believe is nearer the truth. It certainly partakes of the nature of a call-note, for as soon as one bird utters it, he is answered from a little distance by another and so on, but in one way is near to being a song, for as far as I have been able to observe, the male is the only one to

utter it. The second bird of this class, to demand our attention, is the spurred towhee or chewink as we used to call him. Usually he is a very quiet fellow, uttering his call-note at odd times and more frequently when you pass near him but along in the early spring when the robins begin to tune up, a new note greets the ear on a sunny morning. It is a well-modulated trill, "cherwee ee e." It really is a trilling note and a modification of the call-note "chewink" at that. Still as it is heard commonly only during the mating season and is used by the male, it can be called the song of the species. The transition from the call-note to the real

song, in this instance, reminds me of the same change annually in the notes of the western robin. Before the mating season is really upon us there comes a bright morning when the robins begin congregating in the leafless oaks to practice up their songs. They begin with their call-note "kwee kwee kuk kuk kuk kuk" and after repeating it over again and again, the warblings and twitterings of the true song are gradually added and repeated over morning after morning, until finally out from the ordinary notes is developed the perfect song, which once heard is hard to forget.

The Downy Woodpeckers of California.

BY WALTER K. FISHER.

IT HAS been customary to refer the downy woodpeckers of California to *Dryobates pubescens gairdneri* and to *Dryobates pubescens homorus*, the latter being the rather uncommon form with pure white underparts. An examination of a large series of the so-called Gairdner woodpecker from California justifies its separation from the typical *gairdneri* of Oregon and Washington under the name *Dryobates pubescens turati*, founded on *Picus Turati* of Malherbe.¹

***Dryobates pubescens turati* (Malherbe) revived name.**

WILLOW WOODPECKER.

Picus meridionalis Gambel (nec Swainson), *Journ. Acad. Nat. Science Philad.* I, 1847, 55, 105.

Picus Turati Malherbe, *Monographie des Picidees* I, 1861, 125, planche 28.

D [*ryobates*] *Turatii* Cabanis, *Museum Heineanum* IV, 1863, 65.

Picus pubescens Ridgway, *Bull. Nutt. Orn. Club* III, 1878, 67.

Dryobates pubescens gairdnerii Ridgway, and recent authors generally.

Type of diagnosis, ♂ ad., 4729 Coll. Joseph Grinnell; Pacific Grove, Monterey Co., Cal., June 15, 1901; collected by Joseph Grinnell. *Cotype of diag.* ♀ ad., 4782 coll. J. G.; Monterey, Cal., July 5, 1901; coll. by J. G.

Subspecific characters.—Smaller than *Dryobates pubescens gairdneri*, with smaller feet; under parts lighter; the elongated superciliary patch and rictal stripe extending over sides of neck, pure white, instead of smoky white of *gairdneri*; tertials always more or less spotted with white.

Distribution.—Upper Sonoran and Transition zones of California, *except*: desert ranges east of Sierra Nevada, including east slope of Sierras (?), coast region north of Mendocino County and region north of upper end of Sacramento Valley.

Coloration.—Adult male. Underparts and nasal tufts, smoky white; occipital patch, poppy red; extended superciliary patch, rictal stripe extending over sides of neck and median dorsal patch, pure white; wing coverts unspotted²; remiges marked with about five rows of white spots; tertials spotted with white; outer two tail feathers white, with two bars of black, the third feather with outer web white; rest of plumage including malar stripe, lores and auricular patch, black. Measurements: w. 89; t. 49; external (longest) hind toe without claw 12; same with claw 16. Adult female. Similar to male but greater wing coverts sparsely spotted with white and red occipital patch wanting. Measurements of Malherbe's type: w. 87; t. 50; ext. hind toe without claw 12.

Dryobates pubescens turati is a southern representative of *gairdneri*, which it

¹ Malherbe figures and adequately describes two specimens which, he says, were killed near Monterey. There can be no doubt that he indicated the form here redescribed.

² The greater coverts especially in southern birds are often spotted with white. The type is a trifle darker than the average.